

REMARKS

Claims 1, 5 and 6 are pending in this application. By this Amendment, claim 1 is amended, and claims 2-4 and 13-16 are canceled. Support for the amendments to the claims may be found, for example, in the original claims. No new matter is added.

Entry of the amendments is proper under 37 CFR §1.116 because the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not raise any new issue requiring further search and/or consideration as the amendments amplify issues previously discussed throughout prosecution; (c) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (d) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to arguments raised in the final rejection. Entry of the amendments is thus respectfully requested.

In view of the foregoing amendments and following remarks, reconsideration and allowance are respectfully requested.

III. Rejection Under 35 U.S.C. §103

The Office Action rejects claims 1-6 under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 6,187,944 to Koyanagi et al. (herein "Koyanagi"). By this Amendment, claims 2-4 are canceled, rendering their rejection moot. As to the remaining claims, Applicants respectfully traverse the rejection.

By this Amendment, claim 1 is amended to even more clearly distinguish over the applied reference. Specifically, claim 1 is amended to recite "[a] process for stereoselectively producing an E-3- acyloxyacrylonitrile compound of formula (3) which comprises reacting a 3-oxopropionitrile compound of formula (1) with an acid chloride of formula (2) wherein ... the reaction is conducted with removal of hydrogen chloride as a by-product from the system without using a base."

In claim 1, the reaction of the compound of formula (1) and the compound of formula (2) with removal of hydrogen chloride from the system without using a base selectively produces an E-3-acyloxyacrylonitrile.

Koyanagi fails to teach, suggest, or establish any reason or rationale to stereoselectively produce E-3-acyloxyacrylonitrile without using a base. Instead, reaction (A) of Koyanagi requires using a base. See Koyanagi, col. 6, line 35 to col. 7 line 11, reproduced below for convenience (emphasis added).

Now, the reaction (A) will be described.

In the reaction (A), Q, Y, R.sub.1, R.sub.2, 1 and the formula (I) are as defined above, and X is halogen.

The reaction (A) is carried out usually in the presence of a base. As such a base, one or more may suitably be selected for use from e.g. alkali metals such as sodium and potassium; alkali metal alcoholates such as potassium tertiary butoxide; carbonates such as potassium carbonate and sodium carbonate; bicarbonates such as potassium bicarbonate and sodium bicarbonate; metal hydroxides such as potassium hydroxide and sodium hydroxide; metal hydrides such as potassium hydride and sodium hydride; and tertiary amines such as trimethylamine, triethylamine, pyridine and 4-dimethylaminopyridine.

The reaction (A) may be carried out, if necessary, in the presence of a solvent. Such a solvent may be any solvent so long as it is inert to the reaction. For example, one or more may be suitably selected for use from e.g. aromatic hydrocarbons such as benzene, toluene, xylene and chlorobenzene; cyclic or non-cyclic aliphatic hydrocarbons such as carbon tetrachloride, methyl chloride, chloroform, dichloromethane, dichloroethane, trichloroethane, hexane and cyclohexane; ethers such as dioxane, tetrahydrofuran and diethyl ether; esters such as methyl acetate and ethyl acetate; dipolar aprotic solvents such as dimethylsulfoxide, sulfolane, dimethylacetamide, dimethylformamide, N-methylpyrrolidone and pyridine; nitriles such as acetonitrile, propionitrile and acrylonitrile; ketones such as acetone and methyl ethyl ketone; tertiary amines such as trimethylamine and triethylamine; and water.

For the reaction (A), a catalyst such as 4-dimethylaminopyridine may be used, as the case requires.

As seen in the above passage (similar usage is also present throughout Koyanagi), when a component of a reaction is optional, such the above catalyst or solvent, language such as "may

be carried out" or "may be used" is present in the sentence describing the component. Such optional language is not present in the sentence or paragraph describing the presence of a base in reaction (A). In fact, bases, such as triethylamine or sodium hydride, are present in Preparation Examples 1-14 of Koyanagi. See Koyanagi, col. 18-24. Thus, Applicants respectfully submit that one of ordinary skill in the art would recognize that a base is required in reaction (A) of Koyanagi.

In contrast, claim 1 requires that E-3-acyloxyacrylonitrile is obtained selectively with removal of hydrogen chloride as a by-product from the system without using a base. One of ordinary skill in the art would not have modified any process disclosed by Koyanagi to practice the claimed method because Koyanagi provides no reason or rationale to stereoselectively produce an E or a Z-3-acyloxyacrylonitrile without using a base. Accordingly, Koyanagi fails to teach, suggest or establish any reason or rationale to provide each and every feature as recited in claim 1.

Furthermore, Examples 1 and 6 of the specification indicate that E-3-acyloxyacrylonitrile is obtained selectively with removal of hydrogen chloride as a by-product from the system without using a base. Such results have not been observed in the applied reference and would not have been expected.

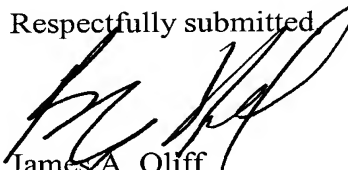
For at least these reasons, claim 1 would not have been rendered obvious by Koyanagi. Claims 5 and 6 depend from claim 1 and, thus, also would not have been rendered obvious by Koyanagi. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

V. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted



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